

1/23

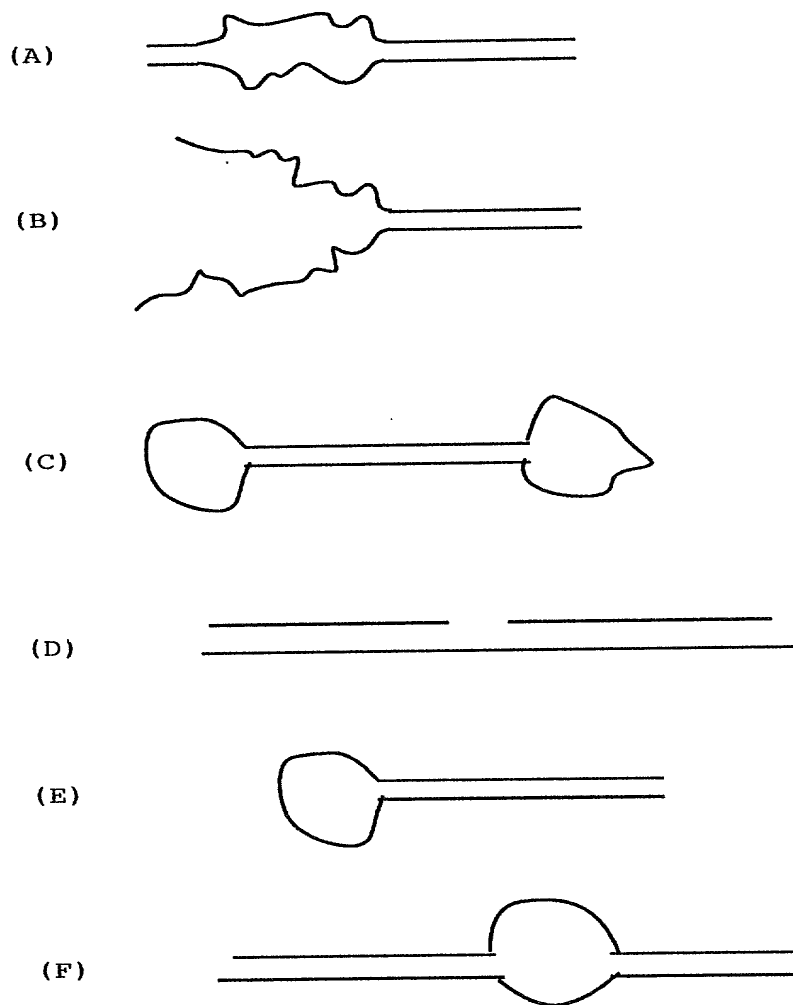


Figure 1 (A-F)

Construct Forms Comprising at Least one Single-Stranded Region

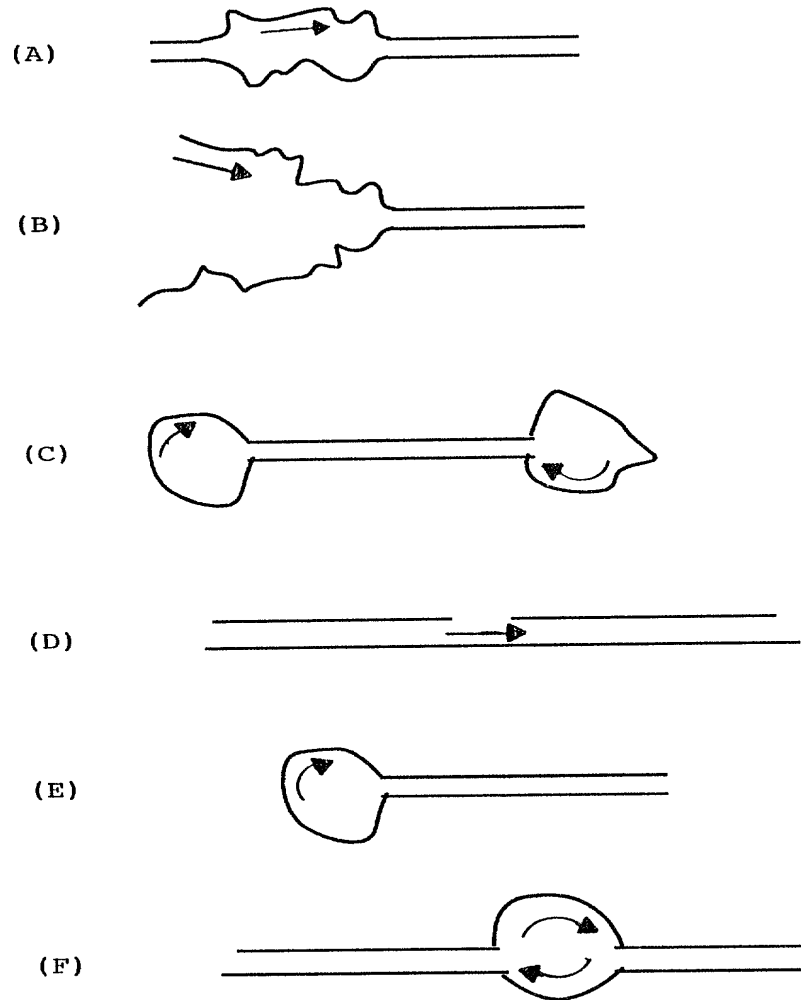


Figure 2 (A-F)

Functional Forms of the Construct

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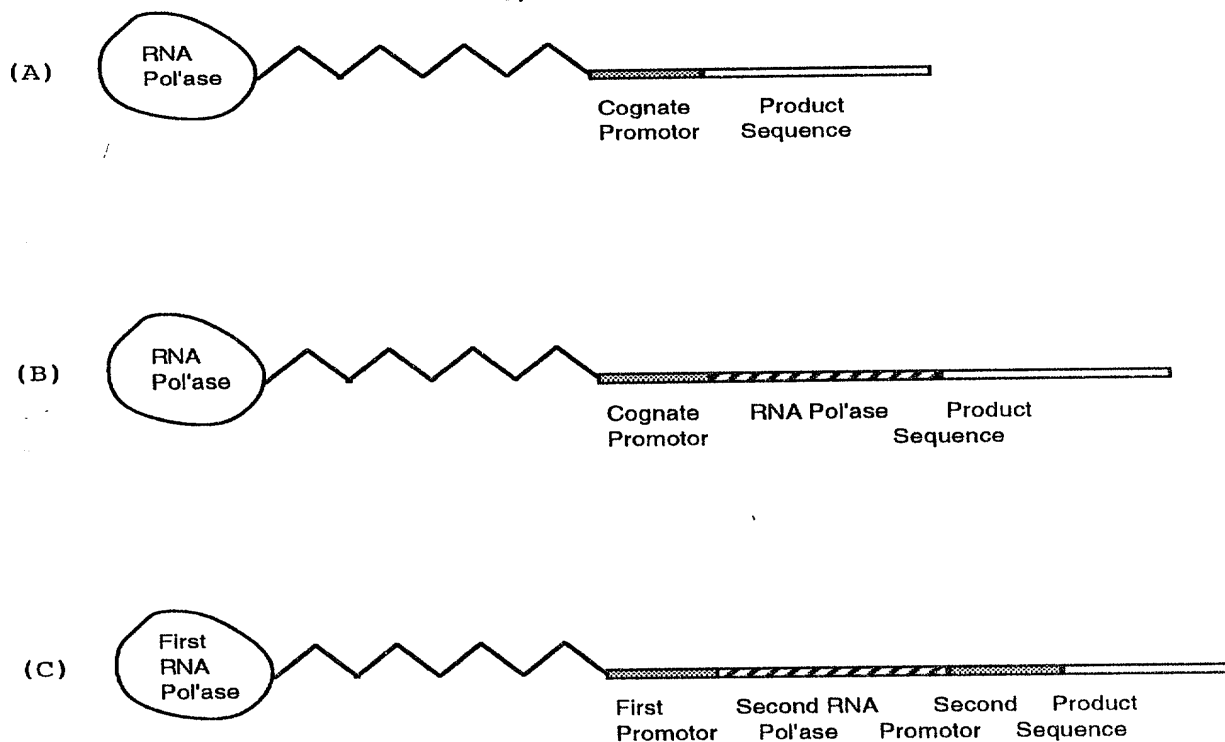


Figure 3 (A-C)

**Three Constructs with an RNA Polymerase
Covalently Attached to a Transcribing Cassette**

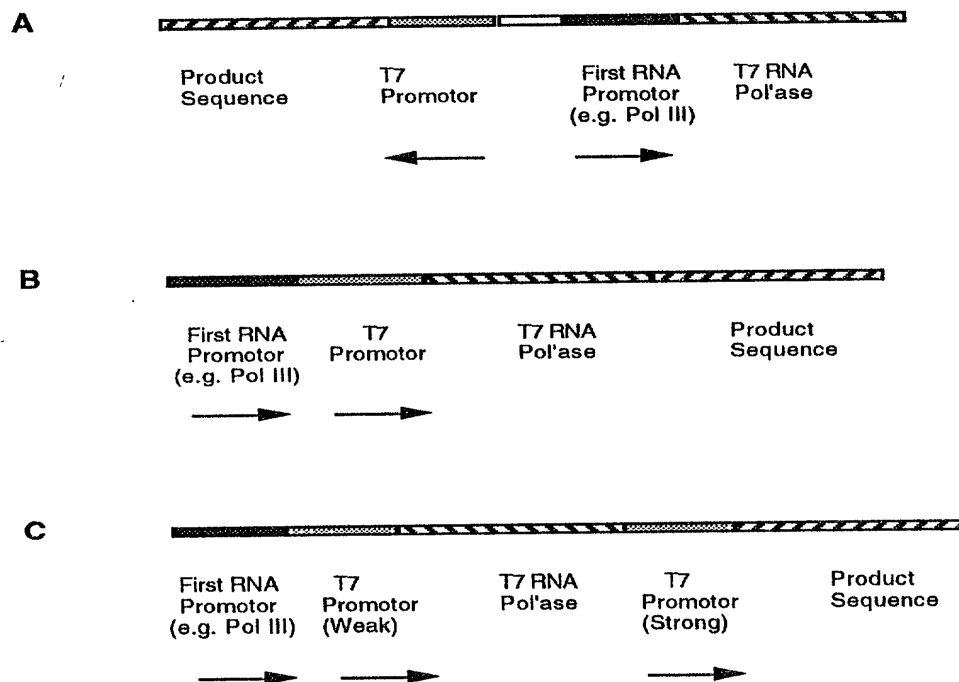


Figure 4 (A-C)

**Three Constructs with Promoters
for Endogenous RNA Polymerase**

M13mp18. Seq Length: 7250

1. AATGCTACTA CTATTAGTAG AATTGATGOC ACCTTTTCAG CTOGOGOOOC
 51. AAATGAAAAT ATAGCTAAAC AGGTTATTGA CCATTGCGA AATGTATCTA
 101. ATGGTCAAAC TAAATCTACT OGTTCGAGA ATTGGGAATC AACTGTTACA
 151. TGGAATGAAA CTTCAGACA COGTACTTTA GTTGCATATT TAAAACATGT
 201 TGAGCTACAG CAOCAGATTC AGCAATTAAG CTCTAAGOCA TCCGCAAAAA
 251 TGACCTCTTA TCAAAAGGAG CAATTAAAGG TACTCTCTAA TOCTGACCTG
 301. TTGGAGTTTG CTTCGGTCTT GGTTGCTTTT GAAGCTCGAA TTAAAACGGC
 351. ATATTTGAAG TCTTTCGGGC TTCCTCTTAA TCTTTTGTAT GCAATCCGCT
 401. TTGCTTCTGA CTATAATAGT CAGGGTAAAG ACCTGATTTT TGATTTATGG
 451. TCATTCTCGT TTTCTGAACT GTTAAAGCA TTTGAGGGGG ATTCAATGAA
 501. TATTTATGAC GATTCGCGAG TATGGAGCGC TATOCAGTCT AAACATTTTA
 551. CTATTACCCC CTCTGGCAAA ACTTCTTTTG CAAAAGCCTC TOGCTATTTT
 601. GGTTTTATATC GTGCTCTGGT AAACGAGGGT TATGATAGTG TTGCTCTTAC
 651. TATGCTCTGT AATTCCTTTT GGGGTTATGT ATCTGCATTA GTTGAATGTG
 701. GTATTCCTAA ATCTCAACTG ATGAATCTTT CTACCTGTAA TAATGTTGTT
 751. CCGTTAGTTC GTTTTATTAA CGTAGATTTT TCTTCCCAAC GTCTGACTG
 801. GTATAATGAG CCAGTCTTA AAATCGCATA AGGTAATTCA CAATGATTAA
 851. AGTTGAAATT AAACCATCTC AAGCCCAATT TACTACTCGT TCTGGTGTTC
 901. TGTTCAGGGC AAGCTTATT CACTGAATGA GCAGCTTTGT TACGTTGATT
 951. TGGGTAATGA ATATCCGGTT CTTGTGAAG ATTAATCTTG ATGAAGGTCA
 1001 GCCAGCCTAT GCGCTGGTC TGTACACCGT TCATCTGTCC TCTTCAAAG
 1051 TTGGTCAGTT CCGTTCCCTT ATGATTGAOC GTCTGCGCCT CGTTCCGGCT
 1101 AAGTAACATG GAGCAGGTG CCGATTTOGA CACAATTTAT CAGGCGATGA
 1151 TACAAATCTC CGTTGTACCTT TGTTTCGGC TTGGTATAAT CGCTGGGGGT
 1201 CAAAGATGAG TGTTTTAGTG TATTCTTTCG OCTCTTCTGT TTTAGGTTGG

Figure 5

M13mp18 Nucleic Acid Sequence

1251	TGCTTCGTGTA	GTGGCATTAC	GTATTTTACC	CGTTTAATGG	AAACTTCCTC
1301	ATGAAAAAGT	CTTTAGTCCT	CAAAGCCTCT	GTAGCCGTTG	CTAOCCTCGT
1351	TCGATGCTG	TCTTTCGCTG	CTGAGGGTGA	CGATCCCGCA	AAAGGGGCT
1401	TTAACTCCT	GCAAGCCTCA	GCGACCGAAT	ATATCGGTTA	TGGTGGGGG
1451	ATGGTTGTTG	TCATTGTGG	CGCAACTATC	GGTATCAAGC	TGTTTAAGAA
1501	ATTACCTCG	AAAGCAAGCT	GATAAACCGA	TACAATTAAA	GGCTCCTTTT
1551	GGAGCCTTTT	TTTTTGAGA	TTTCAACGT	GAAAAATTA	TTATTCGCAA
1601	TTCTTTAGT	TGTTCTTTC	TATTCTCACT	CCGCTGAAAC	TGTTGAAAGT
1651	TGTTTAGCAA	AACCCCATAC	AGAAAATTCA	TTACTAACG	TCTGGAAAGA
1701	CGACAAAAGT	TTAGATCGTT	ACGCTAACTA	TGAGGGTTGT	CTGTGGAATG
1751	CTACAGGGGT	TGTAGTTTGT	ACTGGTGAAG	AAACTCAGTG	TTACGGTACA
1801	TGGGTTCTTA	TTGGGCTTGC	TATCCCTGAA	AATGAGGGTG	GTGGCTCTGA
1851	GGGTGGGGGT	TCTGAGGGTG	GCGGTTCTGA	GGGTGGGGGT	ACTAAACCTC
1901	CTGAGTACGG	TGATACAACCT	ATCCGGGGCT	ATACTTATAT	CAACCTCTCT
1951	GACGGCACTT	ATCCGCTTGG	TACTGAGCAA	AACCCGCTA	ATCCTAATCC
2001	TTCTCTTGAG	GAGTCTCAGC	CTCTTAATAC	TTTCATGTTT	CAGAATAATA
2051	GGTTCGGAAA	TAGGCAGGGG	GCATTAAGTG	TTTATACGGC	CACTGTACT
2101	CAAGGCACTG	AACCCGTTAA	AACCTATTAC	CAGTACACTC	CTGTATCATC
2151	AAAAGCATG	TATGACGCTT	ACTGGAACGG	TAAATTCAGA	GACTGGGCTT
2201	CAAGGCACTG	AACCCGTTAA	AACCTATTAC	CAGTACACTC	CTGTATCATC
2151	AAAAGCATG	TGCTCAACCC	TCCTGTCAAT	GCTGGGGGGG	GCTCTGGTGG
2201	TCCATTCTGG	CTTTAATCAA	GATCCATTGG	TTTGTGAATA	TCAAGGCCAA
2251	TGTTCTGAAC	TGCTCAACCC	TCCTGTCAAT	GCTGGGGGGG	GCTCTGGTGG
2301	TGGTTCTGGT	GGGGGCTCTG	AGGGTGGTGG	CTCTGAGGGT	GGGGGTTCTG
2351	AGGGTGGGGG	CTCTGAGGGA	GGGGGTTCCG	GTGGTGGCTC	TGGTTCCGGT
2401	GATTTTGATT	ATGAAAAGAT	GGCAAACGCT	AATAAGGGGG	CTATGAACGA
2451	AAATGCGGAT	GAAAAAGGGC	TACAGTCTGA	CGCTAAAGGC	AAACTTGATT

Figure 5

M13mp18 Nucleic Acid Sequence

2501	CTGTGCTAC	TGATTACGGT	GCTGCTATOG	ATGGTTTCAT	TGGTGACGTT
2551	TCCGGCCTTG	CTAATGGTAA	TGGTGCTACT	GGTGATTTTG	CTGGCTCTAA
2601	TTCCCAAATG	GCTCAAGTOG	GTGACGGTGA	TAATTCACCT	TTAATGAATA
2651	ATTTCCGTCA	ATATTTACCT	TCCCTCCCTC	AATOGGTTGA	ATGTGCGOCT
2701	TTTGTCTTTA	GCGCTGGTAA	ACCATATGAA	TTTTCTATTG	ATTGTGACAA
2751	AATAAACTTA	TTCOGTGGTG	TCTTTGCGTT	TCTTTTATAT	GTTGOCACCT
2801	TTATGTATGT	ATTTTCTACG	TTTGCTAACA	TACTGCGTAA	TAAGGAGTCT
2851	TTATCATGCC	AGTTCCTTTG	GGTATTOCGT	TATTATTGOG	TTTOCTCGGT
2901	TTCCTTCTGG	TAACCTTGTT	CGGCTATCTG	CTTACTTTTC	TTAAAAAGGG
2951	CTTCGGTAAG	ATAGCTATTG	CTATTTTCATT	GTTTCTTGCT	CTTATTATTG
3001	GGCTTAACTC	AATTCTTGTTG	GGTTATCTCT	CTGATATTAG	CGCTCAATTA
3051	CCCTCTGACT	TTGTTCAAGG	TGTTCAAGTTA	ATTCTCCCGT	CTAATGCGCT
3101	TCCCTGTTTT	TATGTTATTC	TCTCTGTAAA	GGCTGCTATT	TTCATTTTTG
3151	ACGTTAAACA	AAAAATOGTT	TCTTATTTGG	ATTGGGATAA	ATAATATGGC
3201	TGTTTATTTT	GTAAGTGGCA	AATTAGGCTC	TGGAAAGAOG	CTOGTTAGOG
3251	TTGGTAAGAT	TCAGGATAAA	ATTGTAGCTG	GGTGCAAAAT	AGCAACTAAT
3301	CTTGATTTAA	GGCTTCAAAA	OCTCCCGCAA	GTOGGGAGGT	TOGCTAAAC
3351	GCTGOGGTT	CTTAGAATAC	CGGATAAGOC	TTCTATATCT	GATTTGCTTG
3401	CTATTGGGOG	CGGTAATGAT	TOCTACGAATG	AAAATAAAAA	CGGCTTGCTT
3451	GTTCTOGATG	AGTGCGGTAC	TTGGTTTAAT	ACCGGTTCTT	GGAATGATAA
3501	GGAAAGACAG	CCGATTATTG	ATTGGTTTCT	ACTGCTOGT	AAATTAGGAT
3551	GGGATATTAT	TTTTCTTGTT	CAGGACTTAT	CTATTGTTGA	TAAACAGGOG
3601	CGTTCTGCAT	TAGCTGAACA	TGTTGTTTAT	TGTGCTGCTC	TGGACAGAAT
3651	TACTTTACCT	TTTGTGGGTA	CTTTATATTC	TCTTATTACT	GGCTCGAAAA
3701	TGCTCTGOC	TAAATTACAT	GTTGGGCGTTG	TTAAATATGG	CGATTCTCAA
3751	TTAAGCCCTA	CTGTTGAGOG	TTGGCTTTAT	ACTGGTAAGA	ATTTGTATAA
3801	CGCATATGAT	ACTAAACAGG	CTTTTCTAG	TAATTATGAT	TCCGGTGTTT

Figure 5

M13mp18 Nucleic Acid Sequence

3851	ATTCTTATTT	AACGCCCTTAT	TTATCACACG	GTCGGTATTT	CAAACCATTA
3901	AATTTAGGTC	AGAAGATGAA	ATTAACATAA	ATAATATTGA	AAAAGTTTTT
3951	TCGGTTCCTT	TGTCCTGCGA	TTGGATTTGC	ATCAGCATTT	ACATATAGTT
4001	ATATAACCCA	AOCTAAGCOG	GAGGTTAAAA	AGGTAGTCTC	TCAGAOCTAT
4051	GATTTTGATA	AATTCACAT	TGACTCTTCT	CAGOGTCCTA	ATCTAAGCTA
4101	TCGCTATGTT	TTCAAGGATT	CTAAGGGAAA	ATTAATTAAT	AGOGAOGATT
4151	TACAGAAGCA	AGGTTATTCA	CTCACATATA	TTGATTTATG	TACTGTTTCC
4201	ATTAAAAAAG	GTAATTCAAA	TGAAATTGTT	AAATGTAATT	AATTTTGTTT
4251	TCTTGATGTT	TGTTTCATCA	TCTTCTTTTG	CTCAGGTAAT	TGAAATGAAT
4301	AATTOGCTC	TGOGOGATTT	TGTAACCTGG	TATTCAAAGC	AATCAGGOGA
4351	AATCCGTTATT	GTTTCTCCCG	ATGTAAAAGG	TACTGTTACT	GTATATTCAT
4401	CTGAOGTTAA	AOCTGAAAT	CTACGCAATT	TCTTTATTTT	TGTTTTACGT
4451	GCTAATAATT	TTGATAATGGT	TGGTTCAATT	OCTTOCATAA	TTCAGAAGTA
4501	TAATCCAAAC	AATCAGGATT	ATATTGATGA	ATTGOCATCA	TCTGATAATC
4551	AGGAATATGA	TGATAATTCC	GCTOCTTCTG	GTGGTTTCTT	TGTTCCGCAA
4601	AATGATAATG	TTACTCAAAC	TTTTAAAATT	AATAACGTTT	GGGCAAAGGA
4651	TTAATACGA	GTTGTGGAAT	TGTTTGTAAT	GTCTAATACT	TCTAAATCCT
4701	CAAATGTATT	ATCTATTGAC	GGCTCTAATC	TATTAGTTGT	TAGTGCTOCT
4751	AAAGATATTT	TAGATAAOCT	TOCTCAATTC	CTTTCTACTG	TTGATTTGCC
4801	AACTGAOCAG	ATATTGATTG	AGGGTTTGAT	ATTTGAGGTT	CAGCAAGGTG
4851	ATGCTTTAGA	TTTTTCATTT	GCTGCTGGCT	CTCAGOGTGG	CACTGTTGCA
4901	GGOGGTGTTA	ATACTGAOOG	OCTCAOCTCT	GTTTTATCTT	CTGCTGGTGG
4951	TTGTTTCGGT	ATTTTAAATG	GOGATGTTTT	AGGGCTATCA	GTTGOGGCAT
5001	TAAAGACTAA	TAGOCATTCA	AAAATATTGT	CTGTGOCACG	TATTCTTACG
5051	CTTTCAGGTC	AGAAGGGTTC	TATCTCTGTT	GGOCAGAATG	TCCCTTTTAT
5101	TAAAGACTAA	TAGOCATTCA	AAAATATTGT	CTGTGOCACG	TATTCTTACG
5151	OGATTGAGOG	TCAAAATGTA	GGTATTTCOA	TGAGOGTTTT	TCCTGTTGCA

Figure 5

M13mp18 Nucleic Acid Sequence

5201	ATGGCTGGOG	GTAATATTGT	TCTGGATATT	AOCAGCAAGG	COGATAGTTT
5251	GAGTTCTCT	ACTCAGGCAA	GTGATGTTAT	TACTAATCAA	AGAAGTATTG
5301	CTACAAOGGT	TAATTTGCGT	GATGGAACAGA	CTCTTTTACT	CGGTGGGCTC
5351	ACTGATTATA	AAAACACTTC	TCAAGATTCT	GGGTAAOOGT	TOCTGTCTAA
5401	AATOCCTTTA	ATOGGCGCTC	TGTTTAGCTC	COGCTCTGAT	TOCAAOGAGG
5451	AAAGCAOGTT	ATAGGTGCTC	GTCAAAGCAA	OCATAGTAOG	CGOOCCTGTAG
5501	CGGOGCATT	AGGCGGGGG	GTGTGGTGGT	TAOGGCGAGC	GTGAOCGCTA
5551	CACCTTGOCAG	CGOOCCTAGOG	COGCTCTCTT	TCGCTTTCTT	COCTTCCTTT
5601	CTOGCCACGT	TOGCGGGCTT	TOOOGTCAA	GCTCTAAATC	GGGGGCTOOC
5651	TTTAGGGTTC	CGATTTAGTG	CTTTAOGGCA	OCTOGAOCOC	AAAAAACTTG
5701	ATTTGGGTGA	TGGTTCAOGT	AGTGGGOCAT	CGOOCCTGATA	GACGGTTTTT
5751	CGOOCCTTGA	CGTTGGAGTC	CACGTTCTTT	AATAGTGGAC	TCTTGTTCOA
5801	AACTGGAACA	ACACTCAAOC	CTATCTGGGG	CTATTCTTTT	GATTTATAAG
5851	GGATTTTGOC	GATTTGCGAA	CCAOCATCAA	ACAGGATTTT	CGOCTGCTEG
5901	GGCAAAOCAG	CGTGGACOGC	TTGCTGCAAC	TCTCTCAGGG	OCAGGCGGTG
5951	AAGGGCAATC	AGCTGTTGOC	CGTCTOGCTG	GTGAAAAGAA	AAACCAOCT
6001	GGGGOCCAAT	ACGCAAAOCG	OCTCTOOCOG	CGGTTTGGOC	GATTCATTAA
6051	TGCAGCTGGC	ACGACAGGTT	TOOGACTGG	AAAGOGGGCA	GTGAGOGCAA
6101	CGCAATTAAT	GTGAGTTAGC	TCACTCATTA	GGCAOOCAG	GCTTTACACT
6151	TTATGCTTCC	GGCTCGTATG	TTGTGTGGAA	TTGTGAGOGG	ATAACAATTT
6201	CACACAGGAA	ACAGCTATGA	CCATGATTAC	GAATTGAGC	TOGGTAOOCG
6251	GCGATCCTCT	AGAGTGAOC	TGCAGGCATG	CAAGCTTGGC	ACTGGGOGTC
6301	GTTTACAAC	GTGTTGACTG	GGAAAACCT	GGGTTAOC	AACCTAATOG
6351	OCTTGACGCA	CAATCOOCTT	TOGOCAGCTG	GCGTAATAGC	GAAGAGGOC
6401	GCAOOGATOG	COCTTCOCAA	CAGTTGCGCA	GCTGAATGG	CGAATGGGCG
6451	TTTGCCCTGGT	TTOGGGCAOC	AGAAGOGGTG	COGGAAAGCT	GGCTGGAGTG
6501	CGATCTTCT	GAGGGOGATA	CGGTGCTGCT	COOCTCAAAC	TGGCAGATGC

Figure 5

M13mp18 Nucleic Acid Sequence

6551	ACGGTTAOGA	TGCGCCCATC	TACACCAACG	TAACTATCC	CATTAACGGTC
6601	AATCGGCGGT	TTGTTCCAC	GGAGAATCG	ACGGGTTGTT	ACTCGCTCAC
6651	ATTTAATGTT	GATGAAAGCT	GGCTACAGGA	AGGOCAGAOG	CGAATTATTT
6701	TTGATGGGGT	TCCTATTGGT	TAAAAAATGA	GCTGATTTAA	CAAAAATTTA
6751	ACGCGAATTT	TAACAAAATA	TTAACGTTTA	CAATTTAAAT	ATTTGCTTAT
6801	ACAATCTTCC	TGTTTTTGGG	GCTTTTCTGA	TTATCAACCG	GGGTACATAT
6851	GATTGACATG	CTAGTTTTAC	GATTACGGTT	CATCGATTCT	CTTGTTTGCT
6901	CCAGACTCTC	AGGCAATGAC	CTGATAGCCT	TTGTAGATCT	CTCAAAAATA
6951	GCTACCCCTCT	CCGGCATGAA	TTTATCAGCT	AGAACGGTTG	AATATCATAT
7001	TGATGGTGAT	TTGACTGTCT	CCGGCCTTTC	TCACCCTTTT	GAATCTTTAC
7051	CTACACATTA	CTCAGGCATT	GCATTTAAAA	TATATGAGGG	TTCTAAAAAT
7101	TTTTATCCTT	GCGTTGAAAT	AAAGGCTTCT	CCCGCAAAG	TATTACAGGG
7151	TCATAATGTT	TTTGGTACAA	CCGATTTAGC	TTTATGCTCT	GAGGCTTTAT

Figure 5

M13mp18 Nucleic Acid Sequence

COMPLEMENTARY TO M₁₃

POSITION	5' * 3'	POSITION	
645	AGCAACACTATCATA	631	M ₁₃ /1
	*		
615	ACGACGATAAAAAACC	601	M ₁₃ /2
	*		
585	TTTTGCAAAAGAAGT	571	M ₁₃ /3
	* *		
555	AATAGTAAAATGTTT	541	M ₁₃ /4
	* *		
525	CAATACTGCGGAATG	511	M ₁₃ /5
	* *		
495	TGAATCCCCCTCAAA	481	M ₁₃ /6
	*		
465	AGAAAACGAGAATGA	451	M ₁₃ /7
	* *		
435	CAGGTCTTTACCTG	421	M ₁₃ /8
	*		
405	AGGAAAGCGGATTGC	391	M ₁₃ /9
	*		
375	AGGAAGCCCGAAAGA	361	M ₁₃ /10

COMPLEMENTARY TO SS PHAGE DNA

POSITION	5' * * 3'	POSITION	
351	ATATTTGAAGTCTTT	366	M ₁₃ /11
	* *		
371	TCTTTTGTGCAAT	386	M ₁₃ /12
	* *		
391	CTATAACTCAGGG	406	M ₁₃ /13
	* *		
411	TGATTTATGGTCATT	426	M ₁₃ /14
	* *		
431	GTTTAAAGCATTGTA	446	M ₁₃ /15
	* *		
451	TATTTATGACGATTG	466	M ₁₃ /16
	* *		
471	TATCCAGTCTAAACA	486	M ₁₃ /17
	* *		
491	CTCTGGCAAACTTC	506	M ₁₃ /18
	* *		
511	TCGCTATTTTGGTTT	526	M ₁₃ /19
	*		
531	AAACGAGGGTTATGA	546	M ₁₃ /20

Figure 6

**Primers for Nucleic Acid Production
Derived from M₁₃mp18 Sequence**

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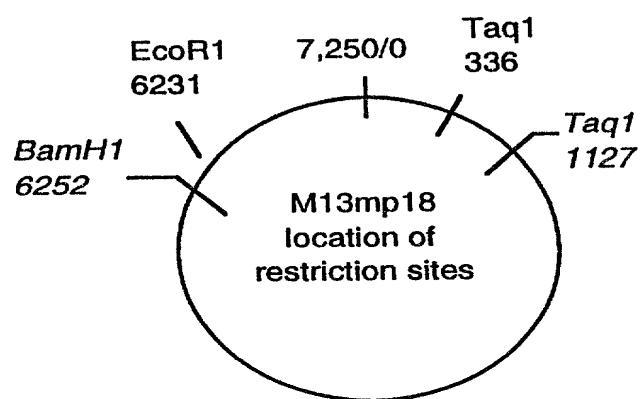
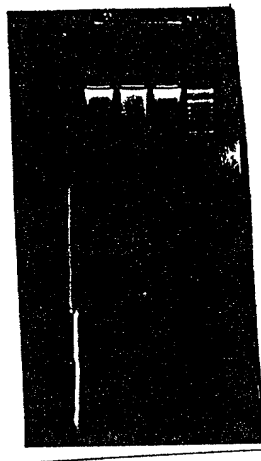


Figure 7

Appropriate M13mp18 Restriction Sites

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Lane 1: from calf thymus + Taq digested mp18 amplification reaction
Lane 2: from Taq digested mp18 amplification reaction
Lane 3: from calf thymus amplification reaction
Lane 4: øX174 Hinf1 size marker

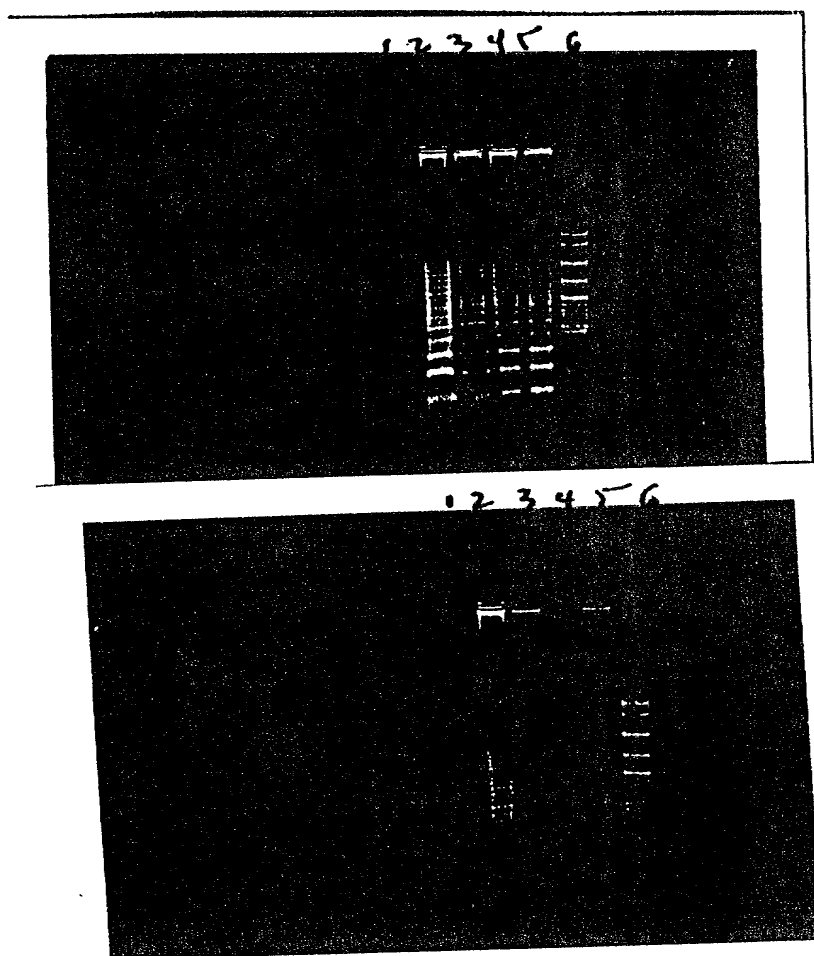
Figure 8

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Lane 1: no template
Lane 2: mp18 template, phosphate buffer
Lane 3: MspI/pBR322 size marker
Lane 4: mp18 template, MOPS buffer

Figure 9

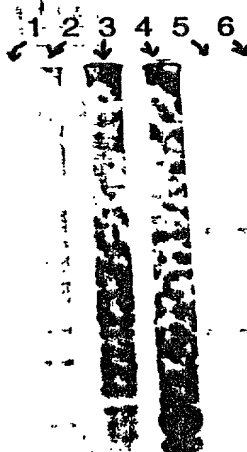


Top= (+) Template
Bottom= (-) Template

Lane 1: phosphate buffer
Lane 2: MES
Lane 3: MOPS
Lane 4: DMAB
Lane 5: DMG
Lane 6: pBR322/Mspl size marker

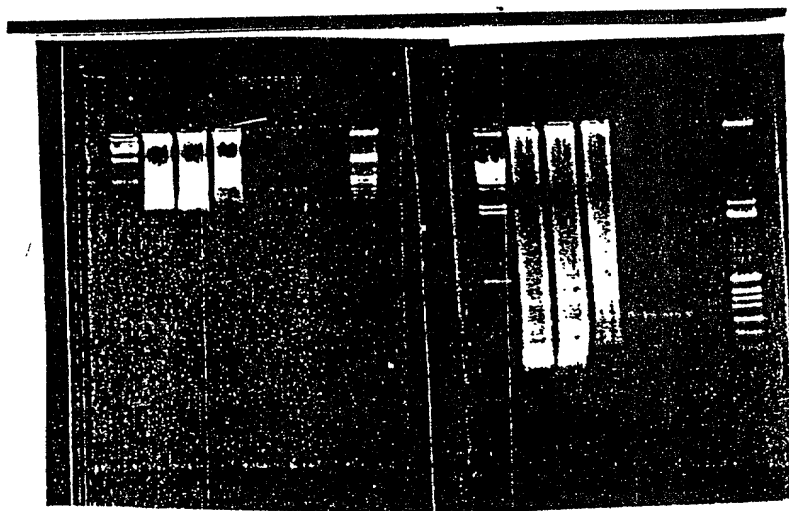
Figure 10

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Lane 1: DMAB buffer, no template
Lane 2: DMAB buffer, mp18 template
Lane 3: DMG buffer, no template
Lane 4: DMG buffer, mp18 template
Lane 5: No reaction
Lane 6: 200 ng Taq I digested mp18
size marker/positive control

Figure 11



First Time Interval Second Time Interval

Agarose Gel Analysis

- Lane 1: lambda Hind III marker
- Lane 2: Amp/Untreated
- Lane 3: Amp/Kinased
- Lane 4: Amp/Kinased/Ligated
- Lane 5: PCR/Untreated
- Lane 6: PCR/Kinased
- Lane 7: PCR/Kinased/Ligated
- Lane 8: øX174/Hinf1 marker

Figure 12

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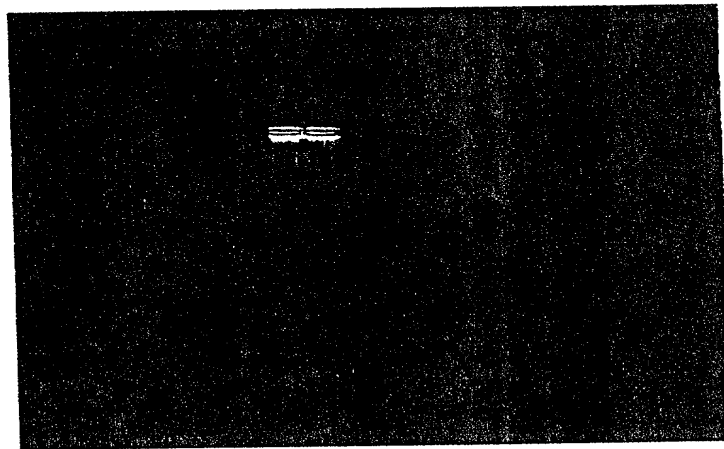
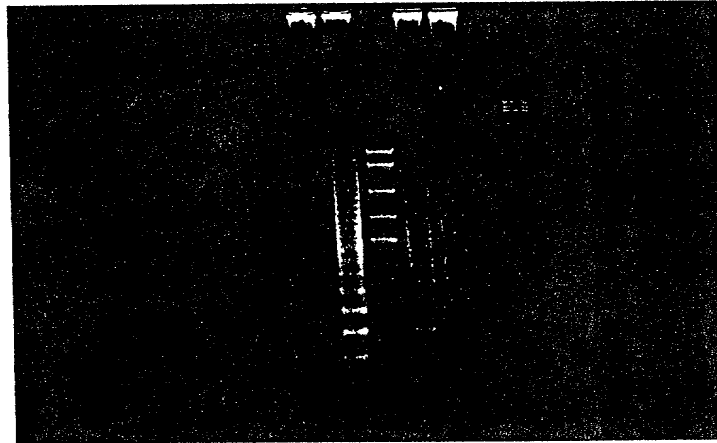


Figure 13

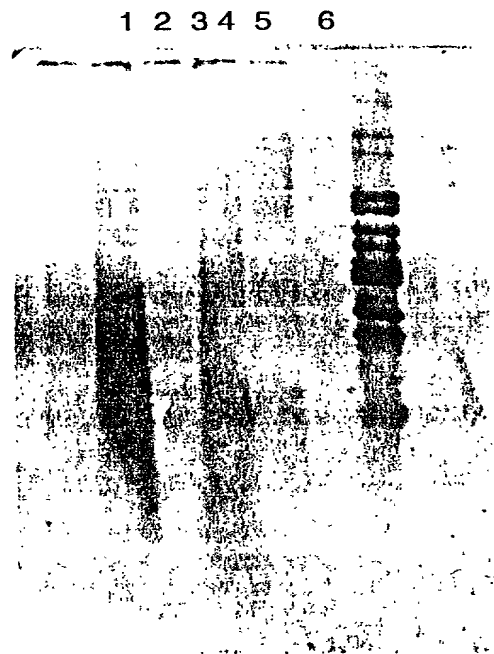
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1 2 3 4 5 6



Lane 1: Primers alone
Lane 2: Primers + taq digested M13 DNA
Lane 3: Molecular weight markers
Lane 4: Primers + RNA
Lane 5: Primers alone
Lane 6: M13 digested DNA
Buffer was dimethyl amino glycine, pH 8.6

Figure 14



Lane 1: Primers alone
Lane 2: Primers + taq digested M13 DNA
Lane 3: Molecular weight markers
Lane 4: Primers + RNA
Lane 5: Primers alone
Lane 6: M13 digested DNA
Buffer was dimethyl amino glycine, pH 8.6

Figure 15

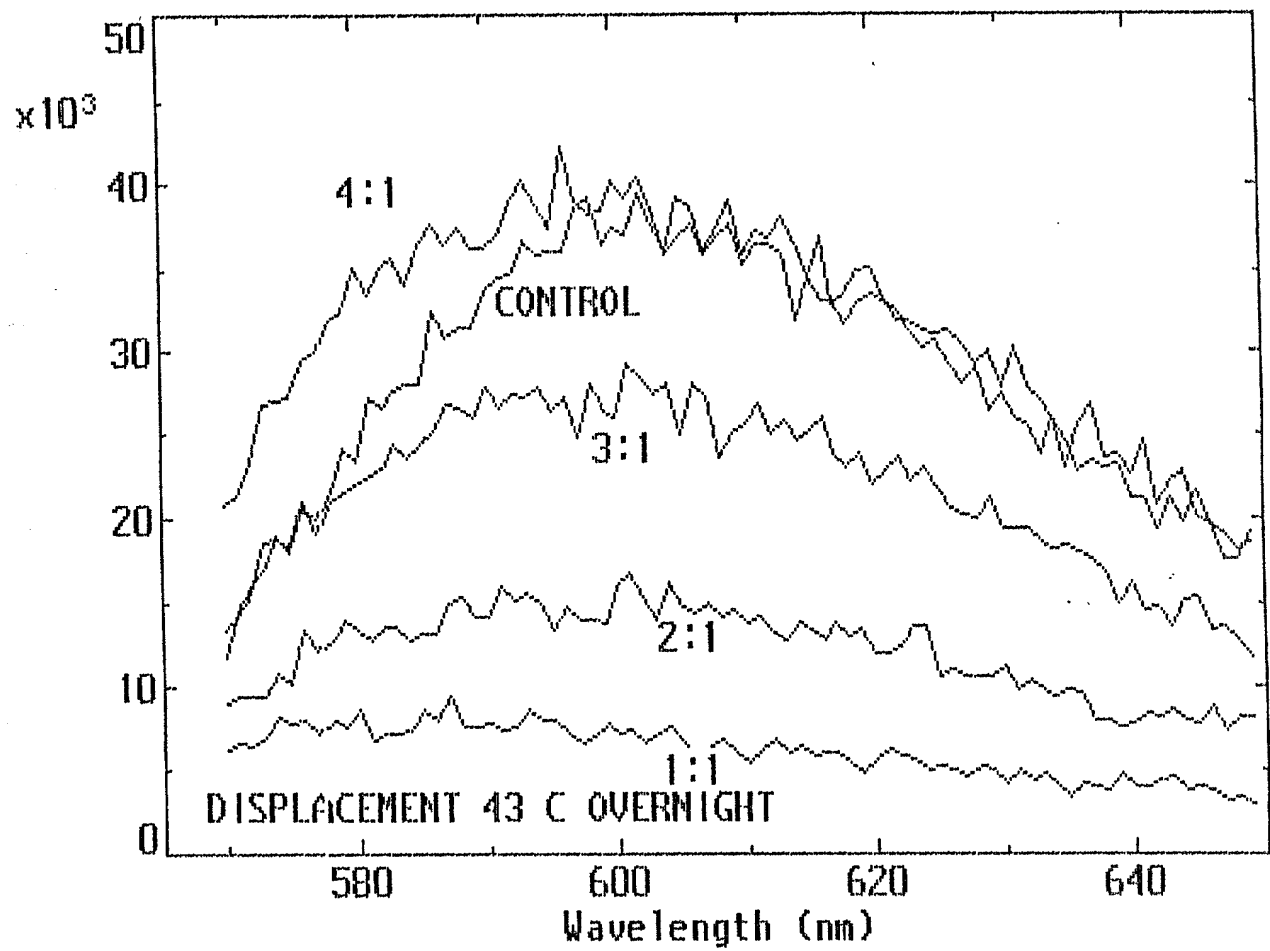


Figure 16

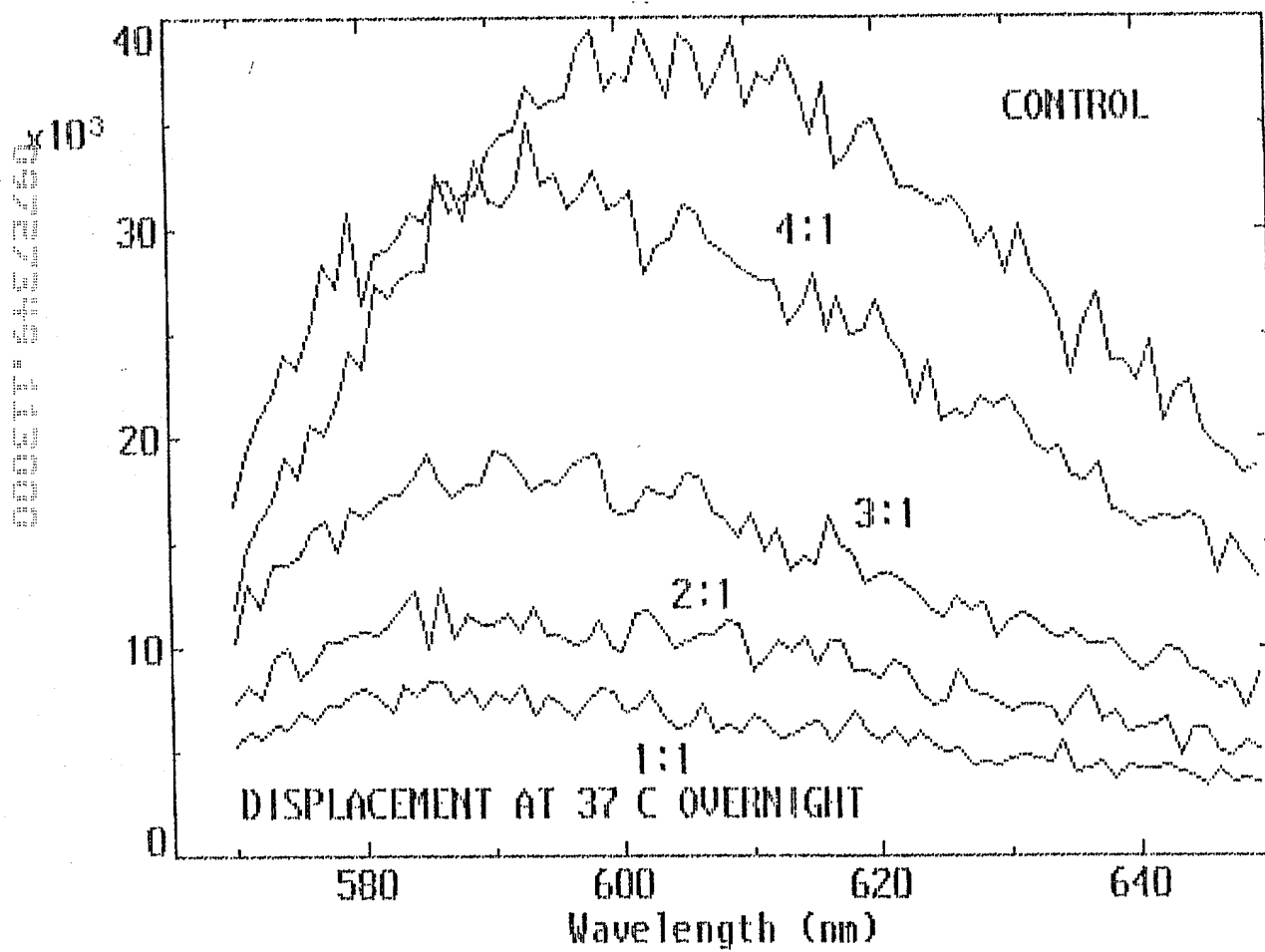


Figure 17

plB1 31-BH5-2

fmet AUG of Lac z {T7 Promotor region....
LAC PROMOTOR..ATG ACC ATG ATT ACG CCA GAT ATC AAA TTA ATA CGA CTC ACT ATA

oligo 50-mer 3'- tac t*aa t'gc ggt* ct*a t*ag t*Vt aat* tat* gct* gag t*ga t*at* c-5'
 10 base insert

T7 RNA Start {«« T3 Promotor Region }
IGGG CTC ICCT TTA GTG ACG GTT AAT
...»»} «- T3 Start Signal

pIBI 31 BSII/HCV

fmet AUG of Lac z (T3 Promotor region →) T3 RNA Start
 LAC PROMOTOR ..ATG ACC ATG ATT ACG CCA AGC TCG AAA TTA ACC CTC ACT AAA /GGG
 oligo 50-mer 3'- tac t*aa t*ac t*aa t*gc ggt* t*V--10 base insert--.....
 {«- T7 Promotor Region }
 MULTIPLE CLONING SITE + 390 BASE INSERT CTA /TAG TGA GTC CGT ATT AAT....
 «- T7 Start Signal
 5'-ct*a t*ag t*ga gt*c gt*a tt*a at*.....

Figure 18